

Virginia Department of Game & Inland Fisheries 2007-08 Avian Influenza Work Plan

As part of Virginia Department of Game & Inland Fisheries (VDGIF) avian influenza surveillance program, VDGIF will collect 750 samples from migratory waterfowl species beginning July 1, 2007 and will continue collections up to March 31, 2008. Sampling efforts from live birds will begin late this summer/early fall. These will include resident (mute swans, wood ducks and mallards) and early migrating species (blue-winged teal and green-winged teal). Capture methods will include round-ups during molts, bait trapping, rocket netting, night-lighting with an airboat, and other methods where feasible. Sampling of hunter shot birds will begin in September (teal season) and October with the opening of the general duck season, and will continue through the end of the duck/goose hunting seasons in January. If sufficient numbers of samples have not been obtained by the end of the hunting season, live capture methods will be continued into March 2008. Samples will also be collected during investigations of mortality/morbidity events. Samples will be collected predominantly from 5 target species/functional group of waterfowl (see below) and opportunistically from other species of concern.

Species/ Functional Group	Sampling Goal
Swans/Geese/Brant	200
Diving Ducks	200
Dabbling Ducks	200
Mallard	150
Total	750

Active Surveillance of Live Wild Birds

This strategy incorporates sampling of live-captured, apparently healthy wild birds for the collection of cloacal and oral cavity swabs. Sampling efforts for live birds will begin in late July 2007 to sample local breeding waterfowl. Sampling for migratory birds or arctic nesting birds will begin in November when birds from high risk areas begin to migrate into the State, and will continue throughout the fall and winter in areas where trapping can be conducted. Capture methods will include bait trapping, rocket netting, night-lighting with an airboat, and other methods where feasible.

VDGIF captures and marks (leg-bands) several waterfowl species as part of our annual population monitoring activities. These efforts will be enhanced to meet the sampling targets identified above. In addition, cooperation and assistance from other organizations, especially the US Fish and Wildlife Service and USFWS Refuges, will improve our ability to meet the target goals.

Active Surveillance of Hunter-harvested Birds

It will likely be easier to obtain larger numbers of samples for some target species from hunter-harvested birds than from live trapping efforts. However, getting sufficient numbers of samples from some target species may be difficult because they are widely dispersed and are not harvested in very large numbers. A combination of hunter-killed and live-trapped samples may be needed in these situations.

Hunting seasons during which most target species are generally taken are held from November-January. Efforts will be made to collect samples early during the hunting season as the potential for detection of AI decreases as the winter progresses. Attempts will be made to distribute the sample across a broad geographic area where possible.

Hunter-harvested birds will be sampled by various means including: at hunter check stations, during field checks at boat ramps and public hunting areas, and through contacts with waterfowl hunters and professional guides. VDGIF operates a check station at the Hog Island Wildlife Management Area (Surry County), and conducts several other managed hunts where there is controlled access. Some samples from target species such as dabbling and diving duck species could be collected at these State Wildlife Management Areas (WMA); however, the number of birds taken may not be sufficient to meet sample needs. Additional efforts will be directed at areas where target species are most abundant and where the harvest on these species is greater. For example, efforts for collecting brant samples will be directed at the Eastern Shore. These efforts will include making contacts with local hunters and guides, and possibly setting up carcass collection or storage locations. In addition, law enforcement officers that routinely check waterfowl hunters could collect birds or could be trained to collect samples from hunter-killed birds. A good communications effort with local hunters will facilitate these collection efforts and will help accurately inform the public about AI issues.

A scientific collection permit will be obtained from the USFWS for use during AI sampling. VDGIF may conduct some collections to meet target goals, but such collections will be kept to a minimum. VDGIF will use live-capture and hunter-killed collection methods whenever possible.

Investigation of Morbidity and Mortality Reports (Targeted Surveillance)

The Eurasian strain of HPAI H5N1 is unusual as it has been documented to cause morbidity and mortality in wild birds. Consequently, we believe targeted surveillance of wild bird die-offs will provide the earliest possibility of detection and will be the most cost-effective method of detecting the virus. VDGIF will conduct targeted surveillance of the waterfowl and shorebird species by investigating any unusual morbidity and mortality events in these target species. Calls regarding wild bird mortality will be handled per the Interagency Call Tree for Reports of Dead Wild Birds. Once VDGIF receives a report of any unusual morbidity and mortality event in waterfowl or shorebirds it will be reported to the Wildlife Veterinarian. A routine disease outbreak investigation will be conducted and a representative sample of sick and dead birds will be collected and refrigerated until testing. In addition, data such as onset, course, duration, distribution, species and environmental conditions will be recorded per the National Wildlife Health Center (NWHC) Specimen History Forms. Large die-offs of any species will also be investigated when the circumstances create a high index of suspicion that AI may be a factor. Furthermore, any die-offs of bird species within a 10 mile radius of a Mallard Release Area will also be investigated, as well as wild bird mortality events within counties that contain high densities of poultry operations (i.e., Accomack, Augusta, Page, Shenandoah, and Rockingham).

Swans & Geese (200 samples)

This functional group includes species that nest in the arctic and winter in Virginia and includes the tundra swan, greater snow goose and Atlantic brant. Also, included in this group are mute swans, a resident species in Virginia.

Atlantic Brant- The majority of the samples for Atlantic brant will come from hunter shot birds. Most brant do not arrive in Virginia until November and peak numbers are not found in the state until December or January. In addition, the brant season generally does not open until December or January, so most samples will be collected during this time period. Brant are located predominantly on the seaside of the Eastern Shore, with a smaller component of birds using the Chesapeake Bay. Several hunting outfitters on the Eastern Shore target brant, and we will work with these outfitters to obtain samples. Samples from hunter-shot birds will be supplemented with samples from live-trapped birds if needed. VDGIF has live-trapped brant using rocket nets in the past on the Eastern Shore and at Langley Air Force base. However, brant can be difficult to trap depending upon the weather, and live-trapping will be employed only if hunter shot samples prove difficult to obtain. A network of commercial guide services that actively hunt brant will be utilized to assist in sampling. In addition VDGIF is participating in an Atlantic Flyway Study of brant winter ecology including collecting birds for food preference and body conditions studies.

Greater Snow Geese- Snow geese generally do not arrive in Virginia until November and peak numbers may not be present until the winter. Like brant, the snow goose distribution in Virginia is somewhat limited. Most snow geese are found on the Eastern Shore or in the Back Bay area. We will rely mostly on hunter shot birds to obtain this sample. Several outfitters/hunters on the Eastern Shore and in Back Bay will be contacted to obtain samples. However, the snow goose harvest in Virginia is not as consistent or reliable as the brant harvest, and live trapping efforts will likely be conducted along with hunter surveys. Trapping efforts on the Eastern Shore will be conducted at or near the Chincoteague National Wildlife Refuge. Snow geese congregate at Chincoteague in November and many remain there throughout the winter. Live trapping will be conducted with rocket nets and possibly swim-in funnel traps. One concern about live-trapping birds is that if bait is used to attract birds to a capture site, it could cause potential conflicts if the hunting season is underway. It may be possible to rocket net snow geese at Chincoteague on roosting sites without the use of bait. In addition, there are some private landowners that do not allow hunting on their property and it may be possible to trap birds using bait in these locations.

Tundra Swans- Similar to Atlantic brant and Greater snow geese, tundra swans generally do not arrive in Virginia in significant numbers until late November or December. Virginia offers a hunting season on tundra swans from December 1 through January 31 and we should be able to collect some samples from hunter shot birds during this time period. However, less than 200 swans are shot per year and the harvest is spread out over a large portion of the state. There are several swan concentrations areas where hunters are often successful and we will concentrate our sampling efforts in these locations. These areas include the Rappahannock River, the Potomac River and the Back Bay/Chesapeake areas. Samples from hunter shot birds will be supplemented with samples from live-trapped tundra swans. Areas to target for live trapping include the Rappahannock and Potomac River areas, Back Bay and the Hog Island Wildlife Management Area. Live trapping will be done predominantly with rocket nets. As with other trapping efforts,

those for tundra swans may have to wait until the end of the hunting season so that baiting activities do not conflict with hunting seasons. Some trapping prior to February may be possible on areas not open to hunting.

Mute Swans - Mute swans are found in Virginia throughout the year. Mute swans are a nuisance species in Virginia and can be taken at any time of the year including the hunting season. Samples from mute swans will also be taken from birds collected under control activities. Mute swans will be sampled primarily during late August and September, when mute swans are molting. Mutes swans will also be sampled opportunistically throughout the year while conducting other field activities. These activities will be conducted on the Chesapeake Bay and on Inland ponds in the eastern portion of the state. The Swan Research Program at Airlie has access to over 100 mute swans under their observation and we will coordinate with them to obtain samples from these birds if needed.

Diving Duck Species (200 Samples)

Virginia winters a significant number of diving ducks. They birds are commonly harvested along the major river on the western shore, in the Chesapeake Bay, and along the Eastern Shore of Virginia. Sampling of these species will almost exclusively come from hunter-harvest birds. Frequently harvest species include the ring-necked duck, lesser scaup, canvasback, ruddy duck, bufflehead, hooded merganser, and red-breasted merganser.

Dabblers Ducks (200 samples)

Nearly 200 dabbling duck species are banded during VDGIF pre-season banding efforts (August through September). Wood ducks are the targeted species during these operations; however, other species such as green-winged teal, blue-winged teal, mallards and black ducks are captured and banded as well. The dominant method is night-lighting from an air boat but other methods such as bait-trapping and rocket-netting may be employed. Currently, VDGIF is capturing black ducks as part of a migration study using satellite telemetry. Trapping occurs from November and can continue as late as March. During these trapping efforts a variety of other dabbling species are frequently caught. Avian Influenza samples will be collected during these trapping efforts as well as from hunter harvested birds via bag checks and other hunter contacts.

Mallards (150 samples)

There are resident (breeding) mallards in Virginia as well as migrant birds that arrive in the fall and winter. Mallards are found throughout the eastern portion of the state and most samples will be collected from the major river drainages in the Chesapeake Bay watershed (Potomac, Rappahannock, York and James Rivers). Samples from mallards will be collected in the late summer/fall by live trapping and in the winter from hunter shot birds. Live trapping methods will include bait trapping, nightlighting with an airboat, and rocket netting. Hunter shot birds will be collected during the hunting season (November through January) from several areas including the Hog Island WMA on the James River, the Princess Anne WMA in Back Bay, and from hunt clubs on the Chickahominy, York and Pamunkey Rivers. There are two Mallard Release Areas in Virginia that release pen-reared mallards for shooting. They are located on the Eastern Shore and the James River. VDGIF may sample live birds prior to their release in August.